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cont

a changing unit for changing the circuit connections of said decrypting unit corresponding to specifications of a decrypting algorithm, read from the computer when the specifications are changed.

REMARKS

In the January 26, 2001 Office Action, the Examiner noted that claims 1-25 were pending in the application, rejected claims 1-23 under the second paragraph of 35 U.S.C. § 112, rejected claims 23-25 under 35 U.S.C. § 102(b) and rejected claims 1-22 under 35 U.S.C. § 103(a). In rejecting the claims, U.S. Patents 4,914,697 to Dabbish et al. (Reference A in the December 2, 1999 Advisory Action); 4,972,478 to Dabbish; 5,345,508 to Lynn et al. (References G and E in the March 23, 1999 Office Action, respectively); and 5,499,192 to Knapp et al. (Reference A in the January 26, 2001 Office Action) and the Microsoft Press Computer Dictionary, Third Edition were cited. Claims 5 and 14 have been canceled and claims 26-31 have been added. Thus, claims 1-4, 6-13 and 15-31 remain in the case. The Examiner's rejections are traversed below.

Newly Cited Art

Microsoft Press Computer Dictionary, 3rd Ed.

In item 9 on pages 3-4 of the Office Action, the Examiner cited the "Microsoft Press Computer Dictionary, 3rd ed.", but nothing was provided with the January 26, 2001 Office Action indicating what was being cited in this publication. Therefore, a telephonic Examiner Interview was held on February 9, 2001 to determine what was being cited from the Microsoft Dictionary.

The Examiner stated that only the definition of "object-oriented programming" in the Microsoft Dictionary was being relied on. Therefore, transmitted herewith as Exhibit A is a copy of page 338 of the Microsoft Press Computer Dictionary, Third Edition which contains the definition of "object-oriented design." As indicated therein, this term refers to a "modular approach to creating a software product or computer system in which the modules (objects) can be easily and affordably adapted to meet new needs."

U.S. Patent 5,499,192 to Knapp et al.

The Knapp et al. patent is directed to a method for generating logic modules from a high level block diagram. By mapping data to programmable logic devices and using libraries of

common arithmetic circuit elements, such as an adder, accumulator, comparator, and multiplexers, a computer program is used to convert symbols selected by a designer into a circuit diagram.

Rejections under 35 U.S.C. § 112, Second Paragraph

In items 4 and 5 on page 2 of the Office Action, claims 1-23 were rejected under the second paragraph of 35 U.S.C. § 112 due to use of the term "substantially". First, it is noted that claim 23 does not use the word "substantially" and therefore, should not have been rejected under the second paragraph of 35 U.S.C. § 112 for this reason.

Second, the term "substantially" is commonly used in claims and is to be interpreted according to the understanding of a person of ordinary skill in the art. See, In re Hutchison, 104 F.2d 829, 42 USPQ 90, 93 (CCPA 1939); Hybritech v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1385, 231 USPQ 81, 94 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987); and KCJ Corp. v. Kinetic Concepts Inc., 223 F.3d 1351, 55 USPQ2d 1835 (Fed. Cir. 2000). It is submitted that the Examiner is giving a person of ordinary skill in the art much to little credit. A person of considerably less than ordinary skill in the art would find nothing indefinite about the phrase "an enclosure substantially surrounding ..." (e.g., claim 1, next to last line).

It is submitted that in the art of electronic components, it is commonly understood that an enclosure which "substantially" surrounds a set of components is one which includes orifices or connectors for connecting the components within the enclosure to other devices, but allows the components within the enclosure to be transported and stacked. If the Examiner has any evidence of a contrary definition for this phrase, the Examiner is respectfully requested to provide evidence of the contrary definition in support of the rejection. Otherwise, it is respectfully requested that the rejection be withdrawn.

Rejection under 35 U.S.C. § 102(b)

In item 7 on page 3 of the Office Action, claims 23-25 were rejected under 35 U.S.C. § 102(b) as anticipated by Dabbish et al. '697. No explanation was provided for how Dabbish et al. '697 teaches or suggests the present invention as recited in claim 23-25. To avoid another rejection without explanation, claims 23-25 have been amended to recite that the change data is read "from a remote computer via a communication network" (e.g., claim 23, line 4). Nothing has been cited or found in Dabbish et al. '697 teaching or suggesting access to a remote computer to obtain change data that is used for "automatically changing a circuit structure"

(e.g., claim 23, line 6). Therefore, it is submitted that claims 23-25 patentably distinguish over Dabbish et al. '697.

Rejection under 35 U.S.C. § 103(a)

In items 9 and 10 on pages 3-5 of the Office Action, claims 1-8, 10-17 and 19-22 were rejected under 35 U.S.C. § 103(a) as unpatentable over Dabbish '478 in view of Knapp et al. and the Microsoft Dictionary. As was the case with respect to Dabbish et al. '697 discussed above, nothing has been cited or found in Dabbish '478 or the other two references that teaches or suggests obtaining change data via a communication network from a remote computer. The Examiner only asserted that "part 104 on Dabbish's diagram is communication circuitry, meaning that the apparatus can be connected to a communication network" (Office Action, page 3, lines 4-5 in the paragraph spanning pages 3 and 4).

It is noted that the communication circuitry 104 is shown in a separate block in a similar manner to the external programming equipment 105. As discussed in previous amendments, the word "external" in the name for block 105 indicates that it is not part of the "soft logic cryptographic circuit" taught by Dabbish '478, but rather something which is **external** to it. In other words, it would be **outside** the "enclosure" (e.g., claim 1, line 16) surrounding the components of Dabbish '478 which would correspond to the present invention. The communication circuitry 104 would correspond to a network which can be coupled to the input/output circuit 103 just as cables are conventionally coupled to connectors on the exterior of an enclosure. Since the device taught by Dabbish '478 is designed to encrypt digital information for transmission, the communication circuitry 104 apparently represents the communication network over which the encrypted data would be transmitted. However, no suggestion has been found in Dabbish '478 of using this network to obtain data that is used to automatically change the circuitry in the device taught by Dabbish '478, as required by all of the independent claims.

For the above reasons, it is submitted that claims 1, 10 and 19-22, and 2-4, 6-8, 11-13 and 15-17 which depend from claims 1 and 10, patentably distinguish over Dabbish '478 in view of Knapp et al. and the Microsoft Dictionary.

In item 11 on page 5 of the Office Action, claims 9 and 18 were rejected under 35 U.S.C. § 103(a) as unpatentable over Dabbish in view of Knapp et al. and the Microsoft Dictionary and further in view of Lynn et al. It is submitted that Lynn et al. does not teach or suggest communication of change data for automatically changing circuitry, or modification of

the device taught by Dabbish '478 for this purpose. Since claims 9 and 18 depend from claims 1 and 10, respectively, it is submitted that claims 9 and 18 patentably distinguish over Dabbish '478 in view of Knapp et al., the Microsoft Dictionary and Lynn et al. for the reasons set forth above.

Request for Examiner Interview

If the Examiner believes that the rejection under the second paragraph of 35 U.S.C. § 112 should be maintained, the Examiner is respectfully requested to contact the undersigned by telephone to arrange an Examiner Interview during which appropriate language can be discussed, to expedite the process of finding acceptable language.

Summary

It is submitted that the references cited by the Examiner, taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-4, 6-13 and 15-31 are in a condition suitable for allowance.

Reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please CANCEL claims 5 and 14 and AMEND the claims in accordance with the following:

1. (FIVE TIMES AMENDED) An encrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

a circuit unit, having at least one programmable logic device, to form an encrypting circuit with the programmable logic device corresponding to given encrypting specifications;

a network connecting unit to connect said encrypting apparatus to the communication network;

a mapping data generating unit to read change data for changing at least one of the encrypting specifications in accordance with predetermined criteria received from the remote computer via the communication network, and to generate a mapping data object representing the structure of the encrypting circuit;

a changing unit, coupled to said circuit unit and said change data generating unit, to change automatically a structure of the encrypting circuit corresponding to the mapping data object by changing a circuit structure of the programmable logic device without removal from said encrypting apparatus; and

an enclosure substantially surrounding said circuit unit, said network connecting unit, said mapping data generating unit and said changing unit.

6. (THREE TIMES AMENDED) The encrypting apparatus as set forth in claim [5] 1, wherein said network connecting unit receives encrypted change data from the communication network, and said mapping data generating unit generates the encrypting circuit using the encrypted change data.

10. (FIVE TIMES AMENDED) A decrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

a circuit unit, having at least one programmable logic device, to form a decrypting circuit with the programmable logic device corresponding to given decrypting specifications;

a network connecting unit to connect said decrypting apparatus to the communication network;

a mapping data generating unit to read change data for changing at least one of the decrypting specifications in accordance with predetermined criteria received from the remote computer via the communication network, and to generate a mapping data object representing the structure of the decrypting circuit;

a changing unit, coupled to said circuit unit and said change data generating unit, to change automatically a structure of the decrypting circuit corresponding to the mapping data by changing a circuit structure of the programmable logic device without removal from said decrypting apparatus; and

an enclosure substantially surrounding said circuit unit, said mapping data generating unit and said changing unit.

15. (THREE TIMES AMENDED) The decrypting apparatus as set forth in claim [14] 10, wherein said network connecting unit receives decrypted change data from the communication network, and wherein said mapping data generating unit changes the decrypting circuit corresponding to the decrypted change data.

19. (FOUR TIMES AMENDED) A signal processing apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

circuit means, having at least one programmable logic device, for forming a circuit corresponding to given specifications;

mapping data generating means for reading change data from the remote computer via the communication network, for changing the specifications of the circuit in accordance with predetermined criteria and for generating a mapping data object representing the structure of the circuit, the change data representing one of encrypting specifications or decrypting specifications;

changing means for automatically changing a structure of the circuit corresponding to the mapping data object; and

an enclosure substantially surrounding said circuit means, said mapping data generating means and said changing means.

20. (FOUR TIMES AMENDED) An encryption processing system for use with a communication system for exchanging encrypted data through a communication network connected to a remote computer at a remote location, comprising:

encrypting circuit means, having at least one programmable logic device, for forming an encrypting circuit corresponding to given encrypting specifications;

encryption mapping data generating means for reading encryption change data from the remote computer via the communication network, for changing the encrypting specifications in accordance with predetermined criteria and for generating an encryption mapping data object representing the structure of the encrypting circuit;

encryption changing means for changing the encrypting specifications and automatically changing a structure of the encrypting circuit corresponding to the encryption mapping data object;

decrypting circuit means, having at least one programmable logic device, for forming a decrypting circuit corresponding to given decrypting specifications;

decryption mapping data generating means for reading decryption change data from the remote computer via the communication network, for changing the decrypting specifications in accordance with the predetermined criteria and for generating a decryption mapping data object representing the structure of the decrypting circuit;

decryption changing means for changing the decrypting specifications and automatically changing a structure of the decrypting circuit corresponding to the decryption mapping data object; and

an enclosure substantially surrounding said encryption and decryption circuit means, said encryption and decryption mapping data generating means and said encryption and decryption changing means.

21. (FOUR TIMES AMENDED) An encrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

encrypting means, composed of an unit of which circuit connections for encrypting data can be changed corresponding to an external command, for encrypting data;

mapping data generating means for reading change data from the remote computer via the communication network to change encrypting specifications in accordance with predetermined criteria and for generating a mapping data object representing the structure of the circuit connections;

changing means for changing the circuit connections of said encrypting means corresponding to the encrypting specifications of the encrypting algorithm only when the encrypting specifications are changed based on the mapping data object; and

an enclosure substantially surrounding said encrypting means, said mapping data generating means and said changing means.

22. (FOUR TIMES AMENDED) A decrypting apparatus connectable via a communication network to a remote computer disposed at a remote place, comprising:

decrypting means, composed of an unit of which circuit connections for decrypting data can be changed corresponding to an external command, for decrypting data;

mapping data generating means for reading change data from the remote computer via the communication network to change decrypting specifications in accordance with predetermined criteria and for generating a mapping data object representing the structure of the circuit connections;

changing means for changing the circuit connections of said decrypting means corresponding to the decrypting specifications of the decrypting algorithm only when the decrypting specifications are changed based on the mapping data object; and

an enclosure substantially surrounding said encrypting means, said mapping data generating means and said changing means.

23. (FIVE TIMES AMENDED) An encrypting method, comprising:

forming an encrypting circuit corresponding to given encrypting specifications with at least one programmable logic device;

reading change data from a remote computer via a communication network, for changing the encrypting specifications; and

automatically generating change data for changing the encrypting specification; and

automatically changing a circuit structure of the at least one programmable logic device corresponding to the change data without removal of the at least one programmable logic device from the encrypting circuit.

24. (FIVE TIMES AMENDED) A decrypting method, comprising:

forming a decrypting circuit corresponding to given decrypting specifications with at least one programmable logic device;

reading change data from a remote computer via a communication network, for changing the decrypting specifications;

automatically generating change data for changing the decrypting specification;
and

automatically changing a circuit structure of the at least one programmable logic device corresponding to the change data without removal of the at least one programmable logic device from the decrypting circuit.

25. (THREE TIMES AMENDED) A signal processing method, comprising:

forming a circuit corresponding to given specifications with at least one programmable logic device;

automatically generating change data for changing the specifications of the circuit, the specifications representing one of encrypting specifications or decrypting specifications; and

reading the change data from a remote computer via a communication network,
and automatically changing a structure of the circuit corresponding to the change data.

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system or new software is developed. *See also* object (definition 2), object-oriented design, object-oriented programming.

object-oriented database \ob`jekt-ōr-ē-ent-əd dā`tā-bās\ *n.* A flexible database that supports the use of abstract data types, objects, and classes and that can store a wide range of data, often including sound, video, and graphics, in addition to text and numbers. Some object-oriented databases allow data retrieval procedures and rules for processing data to be stored along with the data or in place of the data. This allows the data to be stored in areas other than in the physical database, which is often desirable when the data files are large, such as those for video files. *Acronym:* OODB (O`O-D-B). *See also* abstract data type, class, object (definition 2). *Compare* relational database.

object-oriented design \ob`jekt-ōr-ē-en-təd dā-zīn\ *n.* A modular approach to creating a software product or computer system, in which the modules (objects) can be easily and affordably adapted to meet new needs. Object-oriented design generally comes after object-oriented analysis of the product or system and before any actual programming. *See also* object (definition 2), object-oriented analysis.

object-oriented graphics \ob`jekt-ōr-ē-en-təd graf`iks\ *n.* Computer graphics that are based on the use of graphics primitives, such as lines, curves, circles, and squares. Object-oriented graphics, used in applications such as computer-aided design and drawing and illustration programs, describe an image mathematically as a set of instructions for creating the objects in the image. This approach contrasts with the use of bitmapped graphics, in which a graphic is represented as a group of black-and-white or colored dots arranged in a certain pattern. Object-oriented graphics enable the user to manipulate objects as units. Because objects are described mathematically, object-oriented graphics can be layered, rotated, and magnified relatively easily. *Also called* structured graphics. *See also* graphics primitive. *Compare* bitmapped graphics, paint program.

object-oriented interface \ob`jekt-ōr-ē-en-təd in`tər-fās\ *n.* A user interface in which elements of the system are represented by visible screen entities, such as icons, that are used to manipulate the

system elements. Object-oriented display interfaces do not necessarily imply any relation to object-oriented programming. *See also* object-oriented graphics.

object-oriented operating system \ob`jekt-ōr-ē-en-təd op`ər-ā-tēng sī`stəm\ *n.* An operating system based on objects and designed in a way that facilitates software development by third parties, using an object-oriented design. *See also* object (definition 2), object-oriented design.

object-oriented programming \ob`jekt-ōr-ē-en-təd prō`gram`ēng\ *n.* A programming paradigm in which a program is viewed as a collection of discrete objects that are self-contained collections of data structures and routines that interact with other objects. *Acronym:* OOP (ōōp, O`O-P). *See also* C++, object (definition 2), Objective-C.

object-relational server \ob`jekt-rā-lā`shā-nəl sər`vər\ *n.* A database server that supports object-oriented management of complex data types in a relational database. *See also* database server, relational database.

object request broker \ob`jekt rā-kwest` brō-kār\ *n.* *See* ORB.

object wrapper \ob`jekt rap`ər\ *n.* In object-oriented applications, a means of encapsulating a set of services provided by a non-object-oriented application so that the encapsulated services can be treated as an object. *See also* object (definition 2).

oblique \ō-blēk\ *adj.* Describing a style of text created by slanting a roman font to simulate italics when a true italic font isn't available on the computer or printer. *See also* font, italic, roman.

OC3 \O`C-thrē\ *n.* Short for **optical carrier 3**. One of several optical signal circuits used in the SONET high-speed fiber-optic data transmission system. OC3 carries a signal of 155.52 Mbps, the minimum transmission speed for which SONET and the European standard, SDH, are fully interoperable. *See also* SONET.

OCR \O`C-R\ *n.* *See* optical character recognition.

octal \ok`təl\ *n.* The base-8 number system consisting of the digits 0 through 7, from the Latin *octo*, meaning "eight." The octal system is used in programming as a compact means of representing binary numbers. *See* Appendix E. *See also* base (definition 2).

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